



# ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

## Livestock Facility Inspection Checklist

### GENERAL INFORMATION

TYPE OF INSPECTION:

☒ CAFO ☐ COMPLAINT ☐ RECONNAISSANCE ☐ ERU FOLLOW UP ☐ OPERATOR REQUEST ☐ OTHER

FACILITY NAME (LLC, Inc., Corp, Partnership, sole proprietorship, etc.)

**Hollis Shafer Swine Farm (or Hollis Shafer Sow Facility)**

INSPECTION DATE

**April 16, 2012**

ARRIVAL TIME

**~10:30 AM**

ADDRESS

**785 N. Taylor Lane**

INSPECTOR(s)

**E. Ackerman & S. Fower**

DEPARTURE TIME

**~1:00 PM**

CITY

**Astoria**

STATE

**IL**

ZIP CODE

**61501**

ACCOMPANIED BY (if applicable)

**Chris Cooper**

COUNTY

**Fulton**

SECTION

**31**

TOWNSHIP

**T3N**

RANGE

**R1E**

POLITICAL TOWNSHIP

**Astoria**

TEMPERATURE

**~52 F**

PRECIPITATION TYPE

**Sunny/Cloudy**

Facility Owner(s):

Exemption 6 and Exemption 7(C)

NAME

**Hollis Shafer**

CONTACTED

☒ YES ☐ NO

PHONE

Exemption 6 and Exemption 7(C)

MOBILE

ADDRESS

Exemption 6 and Exemption 7(C)

CITY

STATE

ZIP CODE

NAME

CONTACTED

☐ YES ☐ NO

PHONE

MOBILE

ADDRESS

CITY

STATE

ZIP CODE

Facility Operator(s):

Exemption 6 and Exemption 7(C)

NAME

**Steve Whittig**

CONTACTED

☒ YES ☐ NO

PHONE

Exemption 6 and Exemption 7(C)

MOBILE

ADDRESS

CITY

STATE

ZIP CODE

NAME

**Chris Cooper**

Exemption 6 and Exemption 7(C)

CONTACTED

☒ YES ☐ NO

PHONE

Exemption 6 and Exemption 7(C)

MOBILE

ADDRESS

Exemption 6 and Exemption 7(C)

CITY

STATE

ZIP CODE

### NPDES PERMIT INFORMATION (If no NPDES Permit, skip this section)

1. What type of NPDES permit has been issued?

☐ Individual NPDES Permit

☐ General NPDES Permit

NPDES #

2. What date was the NPDES permit issued?

3. What date does the NPDES permit expire?

4. Is a copy of the NPDES permit onsite?

☐ YES

☐ NO

5. Permitted number of animals (no. & specie)?

6. Does the NPDES Permit contain a compliance schedule?

☐ YES

☐ NO

7. Have there been any changes made to the production area since the permit was issued?

☐ YES

☐ NO

If "YES", provide a detailed description of those changes.

**None**



**LAND APPLICATION/NUTRIENT MANAGEMENT**

1. How many TOTAL acres are available for land application?	<b>18 Tillable owned, ~4,300 leased</b>	
2. How many acres are READILY available for land application at the time of inspection?	_____ acres	
3. Estimated annual quantities of liquid waste _____ gallons		
4. Estimated annual quantities of solid waste _____ tons		
5. Does the facility have a contractor perform land application? If "YES", Name of Contractor: <b>Matt Bradshaw -Twin Valley Pumping</b>	<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO
6. What type of land application equipment is available to the facility? <input checked="" type="checkbox"/> Umbilical Injection <input checked="" type="checkbox"/> Honeywagon Injection <input type="checkbox"/> Honeywagon Surface <input type="checkbox"/> Irrigation <input type="checkbox"/> Rotational Gun <input type="checkbox"/> Manure Spreader <input type="checkbox"/> Vegetative Filter <input type="checkbox"/> Other _____		
7. Does the facility calibrate the land application equipment? If "YES", What method is used?  <b>Majority of Land application is Contracted Out.</b>	<input type="checkbox"/> YES	<input type="checkbox"/> NO
8. Does the facility land apply within the 150 foot setback from any water well? If "YES", Explain  <b>Majority of Land application is Contracted Out.</b>	<input type="checkbox"/> YES	<input checked="" type="checkbox"/> NO
9. Does the facility land apply within the 200 foot setback from any surface water? If "YES", Explain  <b>Majority of Land application is Contracted Out.</b>	<input type="checkbox"/> YES	<input checked="" type="checkbox"/> NO
10. Does the facility land apply near any residences? If "YES", Explain  <b>Majority of Land application is Contracted Out.</b>	<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO
11. Is livestock waste transferred off-site to another party? If "YES", Are records of manure transfers kept? If "YES", Ask to see records	<input checked="" type="checkbox"/> YES <input type="checkbox"/> YES	<input type="checkbox"/> NO <input checked="" type="checkbox"/> NO
12. Does the facility have a current NMP or CNMP? If "YES", Does the facility maintain a copy of the nutrient management plan (NMP) onsite?	<input checked="" type="checkbox"/> YES <input type="checkbox"/> YES	<input type="checkbox"/> NO <input type="checkbox"/> NO
13. Does the NMP reflect the current operational characteristics (number of animals, cropping, etc.)?	<input type="checkbox"/> YES	<input type="checkbox"/> NO
14. Are the number of acres owned/leased consistent with those in the NMP?	<input type="checkbox"/> YES	<input type="checkbox"/> NO
15. Is manure and wastewater being applied in accordance with setback/buffer requirements of the NMP?	<input type="checkbox"/> YES	<input type="checkbox"/> NO
16. Are all of the records identified in the NMP being maintained and kept current?	<input type="checkbox"/> YES	<input type="checkbox"/> NO
17. Are records being maintained at the required frequency?	<input type="checkbox"/> YES	<input type="checkbox"/> NO
18. Are records being maintained onsite for the period required by NMP and/or NPDES permit?	<input type="checkbox"/> YES	<input type="checkbox"/> NO
19. Is the NMP adequately addressing the storage, handling and application of manure and wastewater to prevent discharges to waters of the U.S.?	<input type="checkbox"/> YES	<input type="checkbox"/> NO



**LIVESTOCK FACILITY DESCRIPTION**

Type of Animals		Number of Animals (currently)	Animal Capacity	Type of Confinement	Number of Structures
SWINE > 55 LBS	Sows	~2,350	~2,400	TOTAL CONFINEMENT BDG	11
SWINE < 55 LBS	Piglets	~4,000	~4,000	TOTAL CONFINEMENT BDG	
SWINE > 55 LBS	Gilts	~150	~150	TOTAL CONFINEMENT BDG	
SWINE > 55 LBS	Boars	~4	~8	TOTAL CONFINEMENT BDG	
Total		~2,504	~2,558		15
(No Piglets)					

Does the facility have an Illinois Certified Livestock Manager (300 or greater animal units)? ☐ N/A ☐ YES ☐ NO

If greater than 1000 animal units but less than 5000 animal units, does the facility have a waste management plan? ☐ N/A ☒ YES ☐ NO

If greater than 5000 animal units, has the facility submitted a waste management plan to IDOA for review? ☒ N/A ☐ YES ☐ NO

Does the facility have any other locations under common ownership, or where equipment and/or manure is shared, or where the other site shares land application sites? If so, put names and addresses below. ☐ YES ☐ NO

**This facility has the majority of the manure land applied by a contractor, but the facility does perform some of the land application itself and has its own land application equipment. The land application is done on neighboring land that the facility does not own. This arrangement has worked well in the past, but during the inspection there appeared to be some neighbors no longer allowing the manure to be land applied to some of the land. Since this facility has so many neighbors with many surrounding acres at this time this facility has enough land available.**

**LIVESTOCK WASTE STORAGE**

1. Does the facility have any existing livestock waste containment system? ☒ YES ☐ NO  
If NO, then proceed to question 10.

2. General description of the waste containment system (include solid and liquid manure handling, mortality, and feed storage areas).

**Please see the attached inspection report from April 16, 2012.**



Type of Storage	Total Storage Capacity (Specify Units)
<input checked="" type="checkbox"/> Anaerobic Lagoon	<b>1-For emergency storage, ~750,000 gal.</b>
<input type="checkbox"/> Covered Lagoon	
<input type="checkbox"/> Holding Pond	
<input type="checkbox"/> Above Ground Storage Tank ("Slurrystore")	
<input checked="" type="checkbox"/> Below Ground Storage Tank	<b>2-One no longer used, one large manure storage basin</b>
<input type="checkbox"/> Settling Basin	
<input type="checkbox"/> Roofed Storage Shed	
<input type="checkbox"/> Concrete Pad	
<input type="checkbox"/> Impervious Soil Pad	
<input checked="" type="checkbox"/> Underfloor Pits	<b>shallow pull-plug pits and 1-10' deep total pit</b>
<input type="checkbox"/> Anaerobic Digester	
<input type="checkbox"/> Manure Stacks	
<input type="checkbox"/> Vegetative Filter	
<input type="checkbox"/> Other _____	
<input type="checkbox"/> None	

3. Do the storage structures have depth markers or staff gauges? ☐ YES ☒ NO

4. Are levels of manure in the storage structures recorded and records kept? ☐ YES ☒ NO

5. Do the storage structures have adequate freeboard? ☐ YES ☒ NO

6. Estimated final stage storage structure freeboard **lagoon~1.5' Large storage basin~6'** in. of total depth \_\_\_\_\_ in \_\_\_\_\_

7. Do facility personnel perform routine visual inspections of the storage structures? ☐ YES ☐ NO

8. Are the routine visual inspections documented? ☐ YES ☒ NO

9. Does the system have an outfall or discharge point? ☒ YES ☐ NO

If "YES", please provide a description (overflow pipe, spill way, etc. Include a description the area receiving the discharge).

**The north side mortality compost unit had a drainage tile that was installed to drain leachate from the compost unit and discharge the leachate into the ground reported to be approximately 100 feet to the east of the unit. Manure was recently released from south side pump station.**

10. Are there any portions of the production area where runoff is not controlled? ☒ YES ☐ NO

If "YES", provide a detailed description of the area(s) of concern:

**Mortality Compost Units had leachate being released from them.**

**South Side Pump Station had recently released manure and had manure solids near the pump station. Some of the clean-outs on the main pipeline for manure transfer had released manure.**

**Old Feed is being placed in a pile in the woods, not being disposed of properly.**

#### **MORTALITIES MANAGEMENT**

1. How are mortalities managed? (Composted, buried, burned, rendering service, other)

**Composted in two mortality compost units.**

2. Are mortalities documented and are records kept? ☐ YES ☐ NO



**FACILITY WATER SOURCES**

1. What type of method is used to provide drinking water for the animals?  
☐ Overflow waters ☐ Tip Tanks ☒ Nipple waters ☐ Water Bowls ☐ Other trough
2. How is the water for animals obtained?  
☒ Community PWS ☒ On-Site Well ☐ On-Site Impoundment ☐ Other 3-deep wells
3. Is a mist cooling system used? ☒ YES ☐ NO  
How is mist water contained?  
**Recycled in the system. Some is being released, but did not appear to be entering the building pits.**

**DAIRY OPERATION (If No Dairy, skip this section)**

1. How many times per day are cows milked? \_\_\_\_\_
2. Describe how the dairy's non-contact cooling water is contained (Example: it is reused for drinking water for the animals).  
**None**
3. Describe how the milking parlor is cleaned (hose or flush) and where the process wastewater goes and how it is contained.  
**None**
4. Describe how the tank(s) are washed and where the process wastewater goes and how it is contained.  
**None**
5. Describe where process wastewater from the plate cooler goes and how it is contained.  
**None**

**BEDDING (If No Bedding, skip this section)**

1. Describe what type of bedding is used for the animals.  
**None**
2. Describe how bedding is collected and how often.  
**None**
3. What is done with the used bedding? ☐ Reused ☐ Land Applied



**MANURE COLLECTION**

1. How is manure collected?
- ☒ Under Floor Pit  
☐ Scraped: ☐ Automatic ☐ Manual  
☐ Flush  
☐ Solids Separator  
☒ Other: **pull-plug into either lagoon or pump station that pumps the manure into the large below ground concrete storage tank.**
2. If manure collection system uses either clean or reused water to flush, describe where this water goes and how it is contained.  
**None**

**FEED STORAGE CONTAINMENT**

1. Describe how feed (silage, hay, etc) is contained.
- ☒ Bulk Bins  
☐ Silage Pit  
☐ Ag Bags  
☐ Hay: ☐ Barn ☐ Outdoor  
☐ Other: \_\_\_\_\_
2. Describe how feed (silage, hay, etc) runoff is contained.
- ☒ Not Applicable – Feed totally enclosed  
☒ Other: **Waste feed is not being properly contained.**  
☐ None

**RECEIVING SURFACE WATERS**

1. Provide a description of the flow path from the facility to the nearest named surface water.  
**Unnamed tributary to Sugar Creek which is tributary to the Illinois River. (Stream Code: Unnamed tributary to DH).**
2. What is the name of the receiving stream?  
**Unnamed tributary to Sugar Creek**
3. Status of the named surface water: ☒ Intermittent ☐ Perennial
4. Are any unnatural bottom deposits observed in the receiving stream: ☐ YES ☐ NO  
If "YES", provide a description of the deposits: **Stream was observed with dark colored liquid.**



<b>DISCHARGES</b>		
1. Have there been any documented discharges of livestock waste to surface water <i>in the past year</i> ? If "NO" proceed to question 2.	<input type="checkbox"/> YES	<input checked="" type="checkbox"/> NO
a. If "YES", specify the date(s). _____		
b. What was the reason for the discharge?		
c. Was the discharge the result of a 25 year-24 hour rainfall event?	<input type="checkbox"/> YES	<input type="checkbox"/> NO
d. What was the precipitation amount? (if applicable)		
e. Was IEMA notified of the discharge?	<input type="checkbox"/> YES	<input type="checkbox"/> NO
f. Has the facility taken corrective action to remedy the situation which caused the discharge(s)?	<input type="checkbox"/> YES	<input type="checkbox"/> NO
If "YES", describe actions taken: <b>None</b>		
2. Is the facility currently discharging livestock waste from the production area? If "NO" proceed to next section.	<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO
a. Was the discharge the result of a 25 year-24 hour rainfall event?	<input type="checkbox"/> YES	<input checked="" type="checkbox"/> NO
b. What was the precipitation amount? (if applicable)		
c. What is the reason for the discharge? <b>Pump station management, allowing manure to be directly discharged from the pump station to clean out the pipelines and to protect the pumps in the manure collection system. Manure Collection Clean-outs releasing manure. Leachate from the mortality compost units.</b>		
d. Were water quality samples taken?	<input type="checkbox"/> YES	<input checked="" type="checkbox"/> NO
e. If "YES", how many? _____		
f. What parameter(s) tested? <input type="checkbox"/> pH <input type="checkbox"/> Ammonia <input type="checkbox"/> Nitrate <input type="checkbox"/> Nitrite <input type="checkbox"/> Phosphorus <input type="checkbox"/> BOD <sub>5</sub> <input type="checkbox"/> Total Susp Solids <input type="checkbox"/> Fecal <input type="checkbox"/> Diss O <sub>2</sub> <input type="checkbox"/> Other _____		
<b>BIOSECURITY – Inspection Activities</b>		
1. Were biosecurity measures discussed with the facility prior to inspection?	<input type="checkbox"/> YES	<input checked="" type="checkbox"/> NO
2. Has there been 24-hours downtime between inspections for all IEPA personnel present?	<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO
3. Was the order of inspection conducted from high risk to low risk?	<input checked="" type="checkbox"/> N/A	<input type="checkbox"/> YES <input type="checkbox"/> NO
4. Did all personnel stay outside livestock management and livestock waste handling facilities as defined in 35 IAC 501.285 and 35 IAC 501.300? If "YES" skip to question 7.	<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO
<b>BIOSECURITY – Personal Protection Equipment</b>		
5. Was sanitary footwear donned prior to entering the livestock management/waste handling facility(s)?	<input checked="" type="checkbox"/> N/A Did not Enter	<input type="checkbox"/> YES <input type="checkbox"/> NO
6. Were disposable coveralls donned prior to entering the livestock management/waste handling facility(s)?	<input checked="" type="checkbox"/> N/A Did not Enter	<input type="checkbox"/> YES <input type="checkbox"/> NO
7. Was sanitary footwear used during the inspection?	<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO
8. Was disposable sanitary outerwear disposed at the facility?	<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO



**BIOSECURITY – Vehicle**

9. Was the vehicle parking location discussed with the facility prior to inspection?	<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO
10. Was the vehicle washed since the inspection prior to current? If "YES" skip to question 12.	<input type="checkbox"/> YES	<input checked="" type="checkbox"/> NO
11. Was the vehicle parked >300-feet from the livestock management/waste handling facility? Explain where vehicle was parked:	<input type="checkbox"/> N/A	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
<b>Vehicle was parked on public roadway, N. Taylor Lane, located next to the facility. The facility was fine with this location for the vehicle.</b>		
12. Was IEPA vehicle used on site?	<input type="checkbox"/> YES	<input checked="" type="checkbox"/> NO
13. Was facility vehicle used on site?	<input type="checkbox"/> YES	<input checked="" type="checkbox"/> NO

**BIOSECURITY – Inspection Equipment**

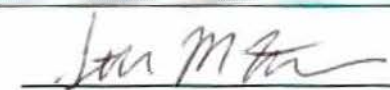
14. Was all equipment wiped down with anti-bacterial wipes?	<input type="checkbox"/> YES	<input checked="" type="checkbox"/> NO
15. Was sample cooler kept inside vehicle during inspection? If "YES" skip question 16.	<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO
16. Was sample cooler wiped down with antibacterial wipes before placing back into vehicle?	<input type="checkbox"/> N/A	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO

**OTHER COMMENTS/NOTES**

**New equipment (pens and paper) was used during the inspection.**

**Please reference Inspection Report dated April 16, 2012.**

Check all attachments: ☒ Narrative ☒ Photos ☒ Site Plan ☐ Sample Results

**INSPECTOR'S SIGNATURE****REPORT DATE****April 16, 2012.**



**Inspection Report**

Subject: Fulton County Hollis Shafer Swine Farm  
(Astoria) CAFO Inspection

To: DWPC/FOS & RU

From: Star M. Fowler DWPC-FOS, Peoria Region

Date: April 16, 2012

On April 16, 2012 Eric Ackerman and I conducted a CAFO Inspection at Hollis Shafer Swine Farm in rural Fulton County. Hollis Shafer and Steve Whittig were contacted by telephone but neither were available for the inspection. Chris Cooper accompanied us during the inspection. Some of the information in this report was obtained through a telephone conversation with Mr. Whittig on May 14, 2012 and a telephone conversation with Mr. Shafer on May 30, 2012. A plan view, various drawings of the site, and digital photographs of the area are attached to this report. Weather conditions for the day were sunny to cloudy with the temperature near 52°F. The following paragraphs provide further details of the field visit which complement the CAFO Checklist.

**Location:**

Hollis Shafer Swine Farm is located approximately 4 miles southwest of Astoria, Illinois. The legal description of the swine facility is the NE ¼, Section 31, T3N-R1E (Astoria Township) in Fulton County. This facility is located in the watershed of an unnamed tributary to Sugar Creek. Sugar Creek is tributary to the Illinois River. (Stream Code: unnamed tributary to DH).

**Contact Information:**

The facility is owned by Hollis Shafer and is managed by Steve Whittig. Contact information for the facility and the personnel in charge are below:

Owner:

Hollis Shafer Phone: Exemption 6 and Exemption 7(C)

Exemption 6 and Exemption 7(C)

Manager:

Steve Whittig Phone: Exemption 6 and Exemption 7(C)

Exemption 6 and Exemption 7(C)

Employee:

Chris Cooper Phone: Exemption 6 and Exemption 7(C)

Exemption 6 and Exemption 7(C)

Facility:

Hollis Shafer Swine Farm Phone: (309) 329-2283  
785 N. Taylor Lane  
Astoria, IL 61501



**Biosecurity:**

A state issued vehicle was used as transportation to the facility. The vehicle was not washed before the inspection, but the vehicle did not enter the facility. The vehicle remained on N. Taylor Lane. The required 24-Hour downtime between inspections of the same species was observed. Protective booties were worn during the inspection. All other biosecurity measures were waved. Direct contact with the animals was avoided.

The facility did report that the Porcine Reproductive and Respiratory Syndrome (PRRS) virus had recently infected the facility. Mr. Cooper stated that the virus had already run its course over the last month and the new piglets are PRRS negative.

**Site Description:**

Hollis Shafer Swine Farm is an approximately 2,400 head sow farrow to wean operation. The site has the capacity for more than 2,400 sows, but the site does not use all the total confinement buildings keeping the working capacity of the facility at approximately 2,400 sows. During the inspection the site consisted of only approximately 2,350 sows, a recent outbreak of PRRS had occurred at the facility and lowered the number of sows on-site.

Below is a table of the number of animals on-site:

Animal	# During Inspection	Capacity
Sow	~2,350	~2,400
Gilt	~150	~150
Boar	~4	~8
Piglet	~4,000	~4,000
<b>Total</b>	<b>~2,504 (Without Piglets)</b>	<b>~2,558 (Without Piglets)</b>

The site weans the piglets at 21 days and sends the piglets to a finishing facility. This facility has 4-5 contracts with finishing operations that receive piglets from this facility. These contracts were reported as not being local. Every week, on Monday, approximately 1,200 piglets are removed from the site.

This facility is a shower-in shower-out facility. There are 9 employees that work on-site full time. The employees have a designated parking area that is strictly enforced.

**Manure Collection System:**

This facility consists of 15 total confinement buildings. Mr. Whittig reported that now 14 of the buildings on-site are equipped with pull-plug shallow pits that gravity drain into either of the two pump stations on-site. There is also an emergency storage livestock lagoon located on the south side of the facility that the collection system drains to by gravity.

There is one total confinement building that is no longer being used that has the manure drain directly into a small abandoned manure storage basin. For more details of this total confinement building and the manure storage basin please see the below section titled *Abandoned Small Manure Storage Basin*.

During the inspection not all 15 total confinement buildings are being used. Five of the fifteen total confinement buildings are no longer being used to produce hogs. Building H on the south



side of the facility was reported to be vacant at this time, but does have the capability to produce hogs. Building E on the north side of the site has been converted into a storage building. Three other total confinement buildings were reported as being vacant and not in service at this time. During the inspection only 10 of the 15 total confinement buildings were being used. For visual of the site see Figure 3.

The facility in the spring of 2011 added a new addition onto the Gestation-Farrowing Confinement Unit, Building A, located on the northeast side of the site. This new addition extends the building another 800' long. The addition is equipped with a 10' deep manure storage pit. The addition was constructed with a perimeter tile. The perimeter tile discharge was not observed during the inspection. The perimeter tile was reported as discharging to the south of the building.

#### *Pump Stations:*

This facility has two pump stations that are used to collect the manure from the shallow pits in the buildings by gravity. The pump stations were previously reported to be 12' RCP Wet Wells and were approximately 5' in diameter. It was reported that the manure is removed from the pump station using 10 Hp electric motor pumps that pump the manure through a pipeline into the manure storage basin.

#### *North Side Pump Station:*

The North Side Pump Station has the capability of receiving manure from 7 of the 8 total confinement buildings on the north side of the site. Only 4 total confinement buildings are feeding into this pump station during the inspection. There are three buildings that are empty and no longer used to produce hogs at this time. One building, Building B, is not connected to the pump station and instead is equipped with a Small Manure Storage Basin. Building A is now partially draining manure into the 10' deep storage pit on the new addition side. For Building A, the manure from the new addition and a small 150 Sow area in the old side of the building is stored in the new 10' deep storage pit, while the rest of the old side of Building A still drains into the North Side Pump Station.

#### *South Side Pump Station:*

The South Side Pump Station has the capability of receiving manure from 7 of the total confinement buildings on-site. 6 total confinement buildings are feeding into this pump station during the inspection.

There were several issues occurring with this pump station. This pump station had recently had manure released from the pump station, there were manure solids surrounding the pump station. This released manure will drain to the east and enter a ravine and could eventually enter a stream.

Mr. Cooper explained that the centrifugal 10 hp pump broke approximately one month ago. Cook AL Electric Motors was hired the next day to replace the pump motor, in doing so the impeller was damaged. The impeller has remained damaged since and the pump station is not working.



Mr. Cooper stated that this pump station had recently foamed up over the top and had some manure released through the foam. During the inspection this pump station only had approximately 2-3 feet of freeboard.

In discussing how the collection of the manure occurs Mr. Cooper explained that he tests the pump station pump before pumping the manure from the pump station into the Manure Storage Basin. He explained that he removed the pump from the discharge pipeline and allows the pump to run blowing out anything that may be caught in the pumping system. This pump discharge is discharged to the ground next to the pump station. There was observed next to the pump station manure solids, piglet remains, and insemination rods. Better management inside the total confinement buildings could help in keeping items out of the manure storage pits in the building's that should not be entering the pits.

On May 30, 2012, during the telephone conversation with Mr. Shafer it was stated that the South Side Pump Station is now fully operational and has been for approximately a month.

#### *Manure Storage Basin:*

The majority of the manure for the facility is stored in a large rectangular shaped below ground concrete manure storage pit, referred to as the Manure Storage Basin. Liquid manure is pumped into this basin from the North Side Pump Station and the South Side Pump Station. This basin was described as being 240' long, 80' wide, and 8' deep. This basin allows for 1.15 MG of liquid manure storage.

During the inspection manure had recently been land applied from this basin. The freeboard level was approximately 6' and there was approximately 2' of manure liquid with solids in the bottom of the basin.

#### *Abandoned Small Manure Storage Basin:*

The only building not connected to a pump station is Building B, today this building is not being used to raise hogs. This building is located on the north side of the site is equipped with a shallow pull-plug system that drains directly to a small below ground storage basin. The now abandoned small manure storage basin is a concrete basin approximately 44' long, 20' wide, and 8' deep, with approximately 0.02 MG storage. This small storage basin had approximately 6' of freeboard during the inspection.

#### *Livestock Lagoon:*

The livestock lagoon is used only for emergency storage. The lagoon is approximately 32 feet long, 12 feet wide, and 8 feet deep allowing for approximately 750,000 gallons of storage. There is a pull-valve from the main manure collection pipeline that allows the manure to enter into the lagoon by gravity.

During the inspection the lagoon had a freeboard of approximately 1.5 feet. There was no freeboard marker in the lagoon. The lagoon liquid has a very distinct red coloration. The berms surrounding the lagoon were thickly vegetated. Mr. Cooper reported that the last time manure had entered the lagoon was approximately 1 year ago. He stated that there were no plans at this time to remove liquid from the lagoon.



### **Manure Collection System Problems:**

Pipelines from buildings pull plug system are releasing manure from cleanouts where the building's pipeline enters the main pipeline into the South Side Pump Station. These manure releases were contributed to low clean-outs and the manure becoming plugged in the system. This has occurred at two locations so far: Building G and Building H. Mr. Cooper dug up the pipelines and created taller cleanouts to help prevent future manure releases from the manure back-ups. The buildings manure drain lines are believed to enter the manure collection mainline at a 90° angle. See Figure 3 for diagram of facility's manure collection system with estimated locations of clean-outs with recent manure releases.

Mr. Cooper stated that the manure release from Building G was from some plastic piece inside the building pit becoming clogged in the manure collection pipeline. This is another case where items entered the manure storage pit under the buildings pits and create a manure release from the manure collection system.

### **Manure Management:**

The facility does perform some of the land application of the manure and has land application equipment on-site. The majority of the land application is contracted out to Matt Bradshaw.

#### *Facility:*

Mr. Cooper does some of the facility's land application. The facility has a Blazer 6000 Gallon Magnum tank attached to injection equipment with 5 injection knives. This tank is pulled by a 9280 Versatile Ford tractor.

There were some manure land application records that were kept inside the tractor. These records included the date: month and day, and the number of trips that were made. Better recording keep should occur in the future.

#### *Matt Bradshaw, Twin Valley Pumping:*

Land application is contracted out to the owner and operator of Twin Valley Pumping, Matt Bradshaw. Mr. Bradshaw uses dragline injection equipment with the capability of applying the manure within a three mile radius of the facility. According to Mr. Whittig Twin Valley Pumping does approximately 80% of the land application for the facility. In the future Mr. Whittig would like to have even more of the land application contracted out to Twin Valley Pumping.

#### *Crop Land Available:*

Mr. Wittig was able to identify a few of the fields that are available for the land application of the manure from this facility.

Below is a summary of the fields available to the facility for land application:

Owner	Field	Method	Acres
Dean Hopkins	Pasture/Wheat Fields	Surface Apply	~120 Acres
Frank Taylor	Cropland (Corn/Bean)	Surface Apply	~60 Acres
Scott & Steve Dean	Cropland (Corn/Bean)	Inject or Surface Apply	600-800 Acres
Jim Meehan	Cropland (Corn/Bean)	Inject or Surface Apply	300-400 Acres
Black Gold	Pasture	Surface Apply	~3,000 Acres



Facility Owned			~18 Acres
		<b>Total</b>	~4,300

**Mortalities:**

This facility had recently had an outbreak of the PRRS virus leading to approximately 8-9 sows a day death rate. Today approximately a month after the PRRS virus outbreak the death rate has dropped to approximately 1-2 sows a week death rate. The carbon source being used for the mortality compost units is mulch. Mr. Whittig reported that the mulch is received from a local distributor that uses trees and landscape waste as the mulch.

*North Mortality Compost Unit:*

The North Mortality Compost Unit was reported as being used to compost all the sow mortalities at the facility and all the piglet mortalities on the north side of the facility. This compost unit consists of 5 bays. It is oriented north south, with three bays opening to the west and two bays opening to the east. The compost unit was open to the elements.

Very dark colored and odorous leachate was observed being released from both side of this mortality compost unit. There were multiple bones observed not being properly covered. There were also sow carcasses exposed. See Photographs #13-#18.

Mr. Cooper had recently installed a tile drainage line on the east side of the compost unit for the two east bays. This tile drains the leachate from the east bays and releases the liquid approximately 100 feet east underground into the adjacent field. During the inspection the outlet for the tile was not observed.

*South Mortality Compost Unit:*

Located on the south side of the site is a small mortality compost unit that is oriented north south with the bays opening to the east. This mortality compost unit had only three bays that were each approximately 10 feet wide, 15 feet deep, and 4 feet tall. The compost unit was open to the elements. Mr. Cooper explained that this compost unit is used only for piglets. Approximately 30-40 piglets, or about half a bobcat bucket, are added to the compost unit daily. It was reported that daily records are maintained on the compost unit. Mr. Cooper stated that last year was the last time the composter was cleaned out with the material land applied.

This compost unit was observed with leachate pooling near the composter. There did not appear to be enough carbon source (mulch), and the carbon source being used appeared to have a high moisture content. There was no thermometer or temperature readings being taken. See Photographs #8-#11.

**Vector Attraction:**

During the inspection a coyote was observed while on-site. It is believed that the coyote was heading towards a mortality compost unit.

**Building Cooling Cells:**

A majority of the total confinement buildings are cooled using exterior cooling cells. This water for the cooling system is attempted to be recycled in a closed-loop system, but during the inspection there was water releasing from the system. This water that is released from this system did not appear to be entering the total confinement building pit.



**Feed:**

Feed is ground on-site. During the inspection there were two locations found where old feed was piled in the wood line in an attempt to dispose of the old feed. This old feed should be properly land applied.

**On-Site Water:**

This facility is connected with the public water supply from Astoria. There are also three deep wells that are used to supply water for the facility. There is one well located on the north side of the site that is approximately 500 feet deep. The other two wells are located on the south side of the site and are approximately 500 and 1,200 feet deep. The wells are used for the hogs with the public water supply used only as an emergency water supply for the hogs. The public water supply is used as the water for the showering facilities and human facilities on-site.

**Generators:**

This facility has three generators on-site that are capable of producing power for the whole facility. These generators are equipped with manual power transfer switches. Two of the generators are PTO driven generators. These PTO generators provide power to the south side of the facility. The other generator is driven by a LP gas engine. This LP generator generates power for the north side of the facility.

**Trash Dump Sites:**

During the inspection there were two areas on-site where debris from the site had been piled near the woods line. Mr. Cooper explained that he was working on cleaning out these areas. Bob Kessler was hired and is hauling out the debris from the facility. Mr. Whittig stated that the majority of the debris is metal and is being taken to a metal scrap yard.

**Nutrient Management Plan:**

This facility reported having a Nutrient Management Plan (NMP), due to Biosecurity concerns the NMP was not provided to us on-site. According to Mr. Whittig this facility has a current NMP that was recently updated after the new total confinement building addition was installed. Terry Feldman of Maurer-Stutz, Inc. completed the NMP. Mr. Whittig stated that a copy of the NMP is kept in the office area of the facility. Mr. Whittig believed all the required records are being maintained.

**Certified Livestock Manager:**

At the time of the inspection there did not appear to be anyone with an active certificate.

**Stream Observation:**

The stream located to the west of the facility on the west side of Taylor Lane was observed. The liquid in the stream had a dark coloration.

**Summary:**

The following recommendations need to be addressed to the facility:

1. Both mortality compost units on-site are in need of maintenance. If the facility decides to keep composting mortalities then the following recommendations are necessary to obtain compliance with the mortality compost units:
  - a. The north mortality compost unit is tiled into a field. This tile should be disconnected immediately.
  - b. Evaluate the design capacity of the compost area. Make the appropriate modifications/improvements to the existing compost unit. We advise you to expand and improve the compost facility to accommodate swine mortality at your site. A University of Illinois Extension Service brochure "Carcass Composting Basics" is enclosed for your information and reference.
  - c. There is a significant amount of leachate being released from both units. There should be no leachate being released from either of the mortality compost units.
  - d. Proper cover should be established for both mortality compost units.
  - e. Proper carbon source should be used; this will help maintain proper moisture content. A few examples of proper carbon sources are: coarse sawmill sawdust, shredded corn stalks, chopped straw, coarse-ground corn cobs.
  - f. The mortality compost units should be covered to help maintain proper moisture content.
  - g. Proper records of mortalities should be maintained.
  - h. Submit a written plan for obtaining compliance for approval by the Agency.
2. The Manure Collection System is becoming plugged due to debris entering the pits. This plugging is causing liquid manure to be released through the Manure Collection System Clean-outs. A written plan should be established and enforced to keep unnecessary items (examples: piglet mortalities and insemination rods) from entering the manure collection pits beneath the total confinement buildings. All the Manure Collection System Clean-outs should be extended to approximately the same height to help prevent future liquid manure releases from the Manure Collection System.
3. South Side Pump Station is not working due to the impeller being damaged. This lead to manure overflowing and becoming released from the pump station. This pump station should be fixed immediately. All the manure solids near the pump station from the liquid manure releases should be removed and properly land applied.
4. Develop a Pump Station Procedure Manual that describes what steps should be taken before the pump station is turned on. This manual should include but is not limited to how to perform a visual inspection of the pump stations and how often visual inspections of the pump stations should occur, what actions should be taken if the pump becomes plugged with debris, what actions should be taken if a pump station is not functioning properly, and what should be done if manure becomes released from a pump station.

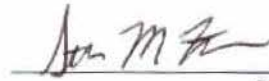
Allowing the pump to discharge liquid manure onto the ground to clean out the pipeline before connecting the pump to the discharge pipeline is not adequate. This practice is not



acceptable to the Agency. A new pump station protocol needs to be established and implemented.

5. Proper management of the Livestock Lagoon should occur. Develop a written procedures manual for the Livestock Lagoon that will be presented to the Agency for approval. Once approved this Livestock Lagoon Procedures Manual should be strictly implemented. The procedures manual should included but is not limited to:
  - a. Installation of an accurate freeboard marker,
    - i. The marker should have measurements, delineated in inches, starting at the top with zero increasing in value to the top of the liquid level. (A yard stick installed vertically with zero at the top is an example.)
    - ii. The top of the marker needs to be level with the lowest point of the lagoon berms.
    - iii. Photographic evidence of the adequate freeboard marker should be sent to the Agency.
  - b. Liquid manure should be removed to attain at all times a minimum of 2 feet of freeboard.
  - c. The integrity of the berms should be properly evaluated, with any found problems with the berms properly addressed.
  - d. The berms surrounding the Livestock Lagoon should be properly maintained. Vegetation should be kept under 6 inches in length.
6. All waste feed should be properly disposed of by land application. Waste feed is not to be disposed of by dumping into the surroundings woods or ravine.
7. Submit to the Agency any and all manure application records for the facility from January 2011 to the present.
8. Proper disposal of the debris located in the two trash dumps on-site should occur. Documentation of what debris was removed and how the debris was disposed of should be presented to the Agency. All the debris located on-site should be removed and properly disposed of, following all regulations of the Agency's Bureau of Land.
9. Since your facility has a capacity greater than 1,000 animal units someone must be certified in manure handling procedures. Previously Steve Whittig was the certified person for the facility. From Illinois Department of Agriculture it was found Steve Whittig's Certified Livestock Managers Certificate has previously expired. If Mr. Whittig has already re-certified please provide verification of the certificate. Otherwise, we recommend that you and/or an active employee at the facility attend a "Certified Livestock Manager Training Workshop" and become a Certified Livestock Manager. Training workshops are provided by the University of Illinois Extension Service.
10. Please send in a copy of the facility's Nutrient Management Plan (NMP) to the Agency for review. The NMP should be followed by the facility with all documentation being properly maintained.
11. Since, this facility has over 1,000 animal units and has multiple locations with discharges the Agency recommends that the facility apply for and obtains a NPDES Permit.

This report is submitted for your information.



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Star M. Fowler

Att: -Figures 1-3  
-Photographs

cc: -Bruce Yurdin, BOW  
-Peoria Files  
-Hollis Shafer, Owner of the Facility



ASTORIA

T.3 N.-R.1 E

# Exemption 6 and Exemption 7(C)



**Figure 1. Location Map of Hollis Shafer Swine Farm near Astoria in  
Fulton County on April 16, 2012.**



Figure 2. Plan View From Google Earth of Hollis Shafer Swine Farm located near Astoria in Fulton County on April 16, 2012.



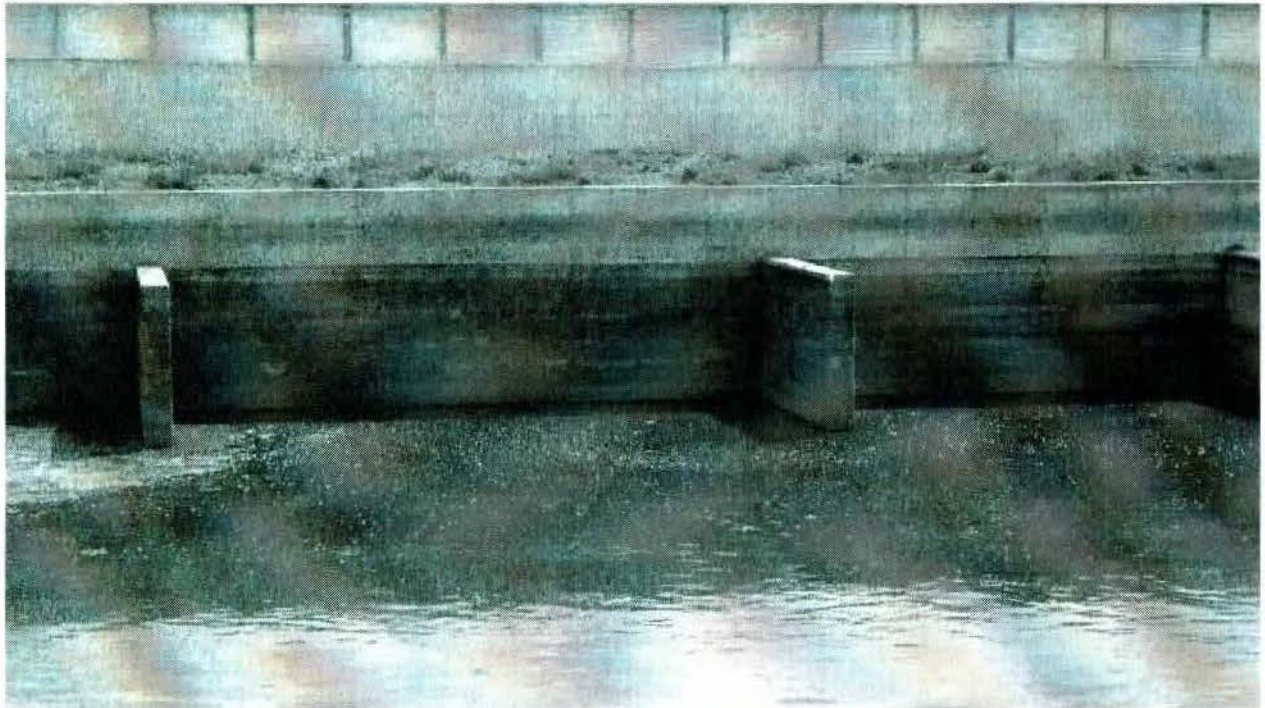




Hollis Shafer Sow Facility  
Fulton County  
April 16, 2012  
(IEPA: Star M. Fowler)



Photograph #1. Stream located to the west of the facility.



Photograph #2. Manure Storage Basin.



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Photograph #3. Recent liquid manure removal from the Manure Storage Basin has occurred.



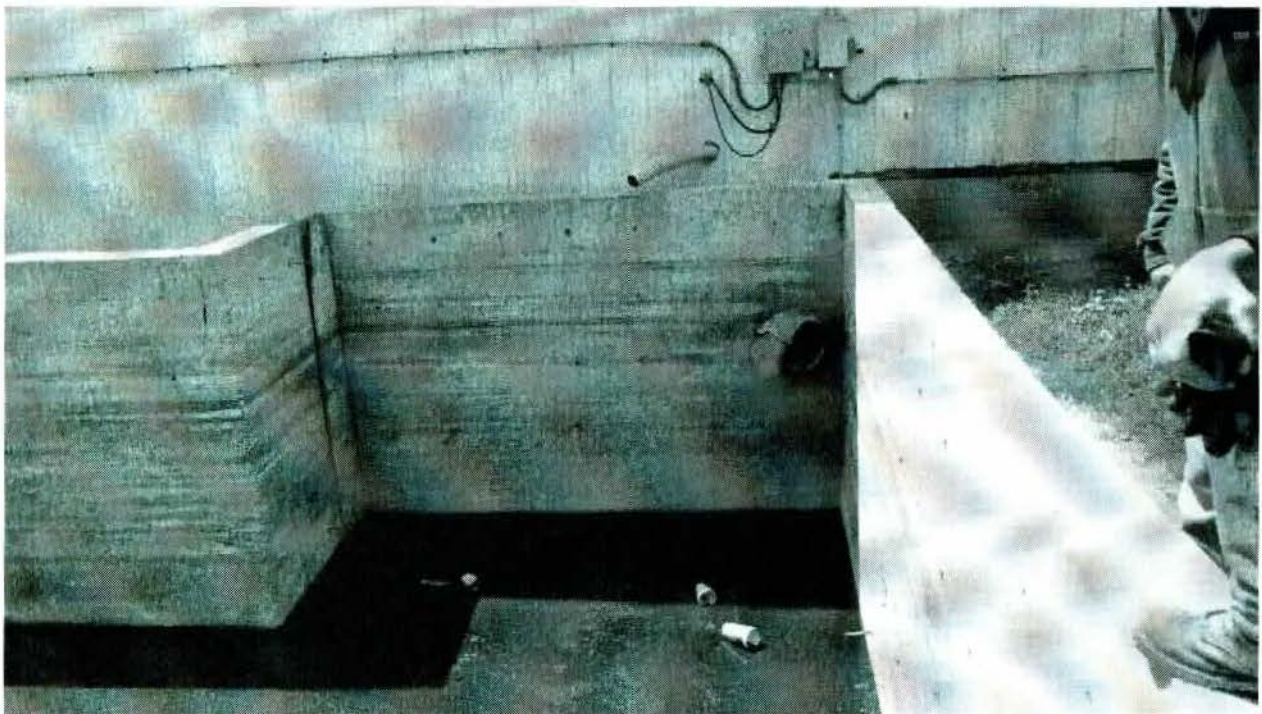
Photograph #4. Manure Storage Basin with manure solids shown.



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Photograph #5. Abandoned Small Manure Storage Basin.



Photograph #6. Manure used to enter the basin through the inlet pipe.



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Photograph #7. Tile inlet riser located to the east of the abandoned small manure storage basin.



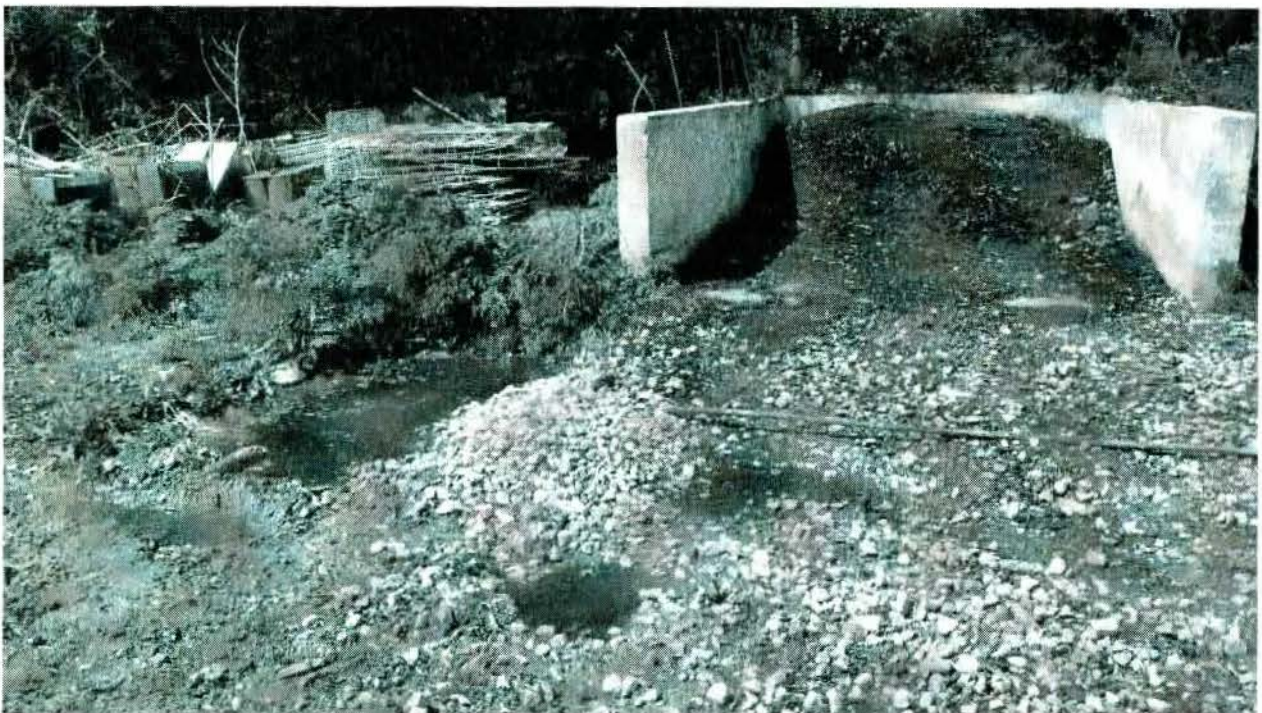
Photograph #8. The South Mortality Compost Unit.



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Photograph #9. Three bins of South Mortality Compost Unit.



Photograph #10. Leachate from the compost unit is being released.



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Photograph #11. South Mortality Compost Unit.



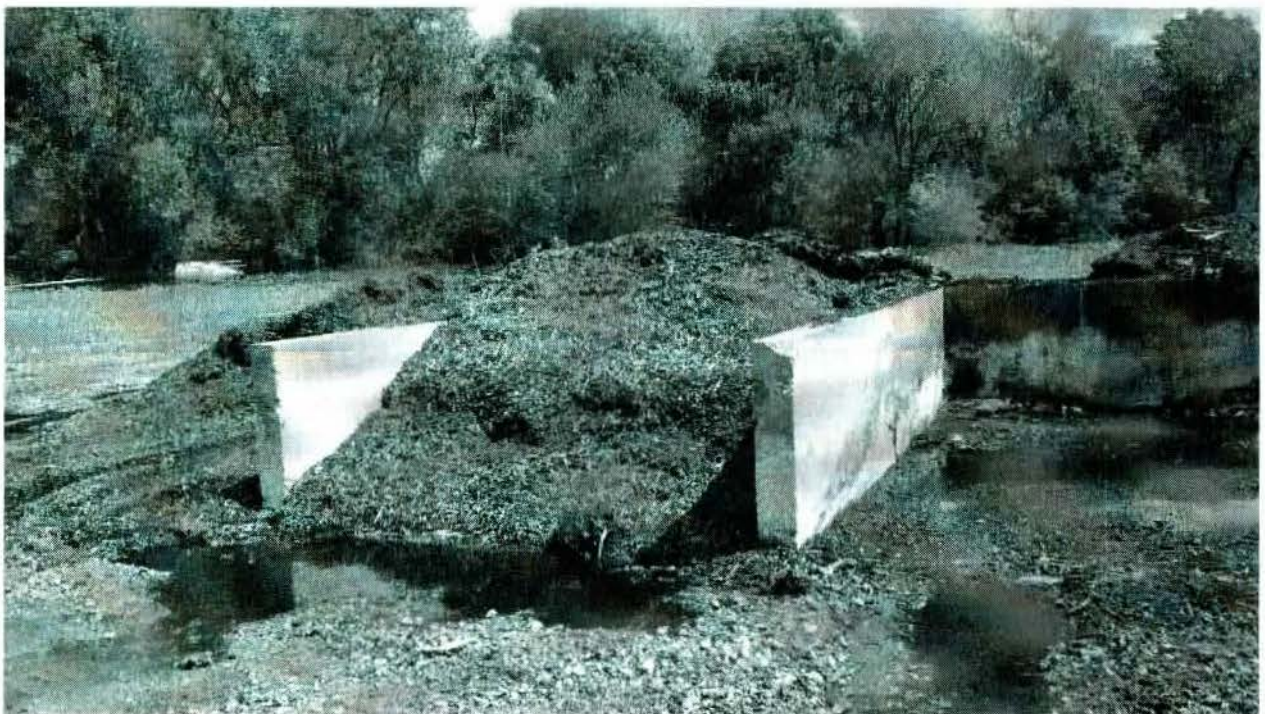
Photograph #12. North Mortality Compost Unit. Sow carcasses exposed. South Side of compostier view is east.



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Photograph #13. Leachate from the North Mortality Compost Unit is being released.



Photograph #14. Northwest bay of the North Mortality Compost Unit.



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Photograph #15. On the north side of the north compost unit the carbon source (mulch) is kept.



Photograph #16. Northeast bay of the north compost unit.



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Photograph #17. The southeast bay of the north compost unit. Multiple bones are exposed. The leachate is being drained out of the compost unit.



Photograph #18. The drainage tile on the east side of the North Mortality Compost Unit. This tile is draining the leachate from the mortality compost unit to the east.



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Photograph #19. East side of the facility, view is south. North Mortality Compost Unit and new addition on the northeast total confinement building.



Photograph #20. Livestock Lagoon located on the south side of the facility.  
Liquid is a red color.



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Photograph #21. East side of Livestock Lagoon, freeboard approximately 1.5 feet.  
There is debris near the wood line.



Photograph #22. Close-up of liquid in the Livestock Lagoon.



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Photograph #23. Manure collection main pipeline pull-plug from South Side Pump Station to the Livestock Lagoon.



Photograph #24. Manure collection main pipeline from South Side Pump Station to the Livestock Lagoon.



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Photograph #25. South Side Pump Station.



Photograph #26. South Side Pump Station, centrifugal 10 hp pump. The piping for the pump discharge is not hooked up to the transfer pipeline.



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Photograph #27. Inside the South Side Pump Station approximately 2-3 feet of freeboard.



Photograph #28. Manure solids are observed surrounding the South Side Pump Station.



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Photograph #29. The manure released from the South Side Pump Station drains to the northeast of the pump station. View of manure solids from past releases from the South Side Pump Station and manure collection system main pipeline clean-outs.



Photograph #30. Clean-out for Building H entering main pipeline for manure collection system. This clean-out had a recent manure release that contributed to the manure solids found in Photograph #29.



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Photograph #31. Recent manure release from Building H clean-out pipe being plugged, located to the east of the building. View is east.



Photograph #32. Building G clean-out pipe recently extended after the clean-out had manure release occur. This clean-out pipe still does not appear to be at the correct elevation to prevent another manure release.



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Photograph #33. Recently extended clean-out on the south-west side of the site.



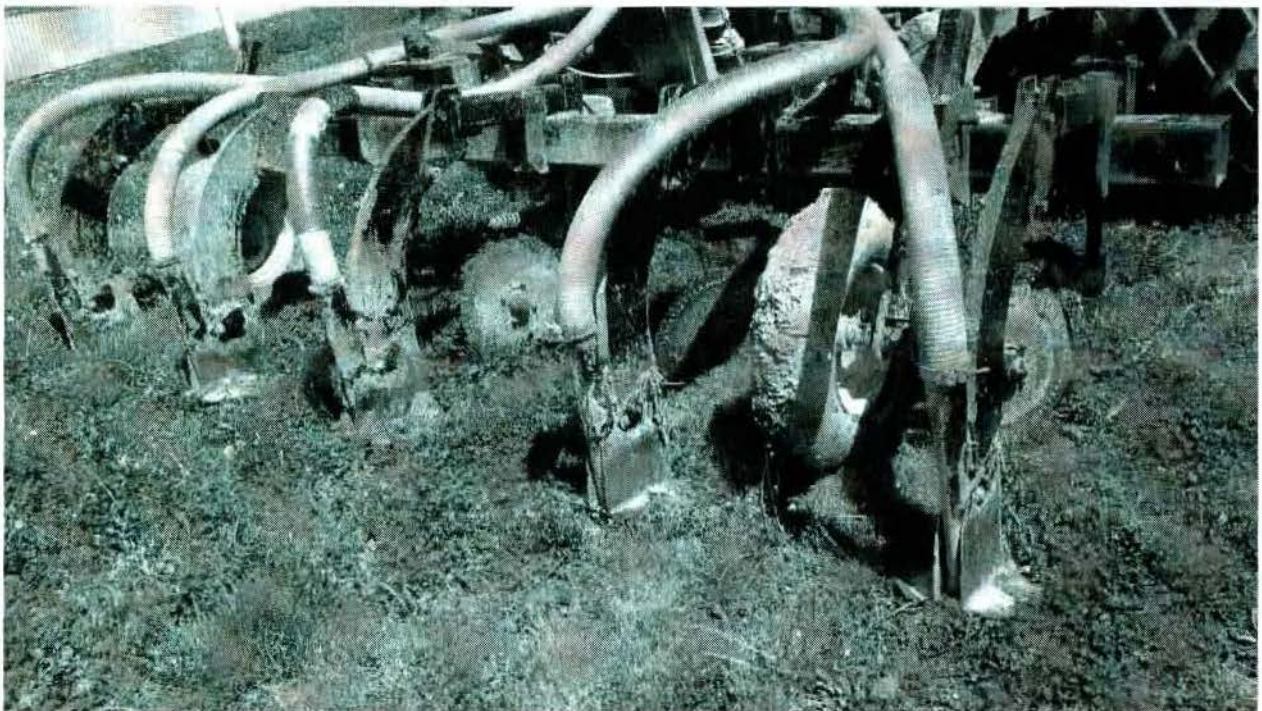
Photograph #34. A 9280 Versatile Ford tractor hooked up to a Blazer 6000 Gallon Magnum tank attached to injection equipment with 5 injection knives.



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Photograph #35. The Blazer 6000 Gallon Magnum tank.



Photograph #36. Close-up of the with 5 injection knives.



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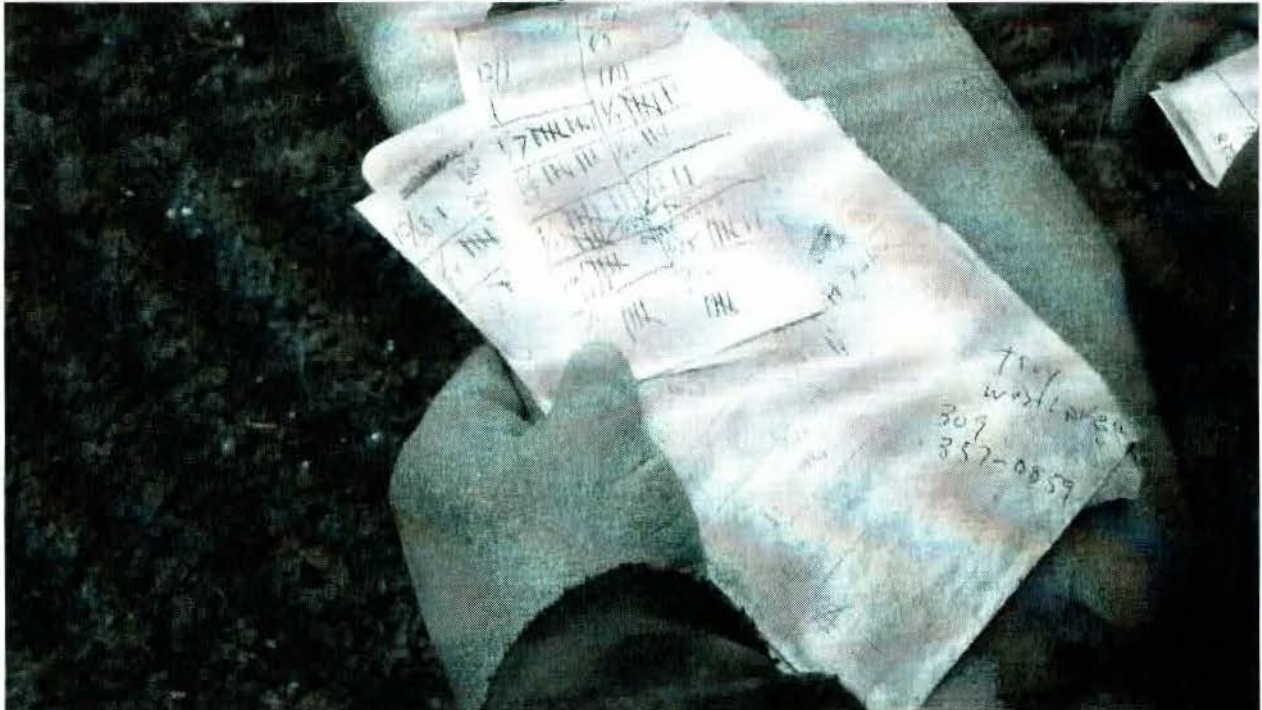
Photograph #37. Manure application records kept inside the tractor cab.



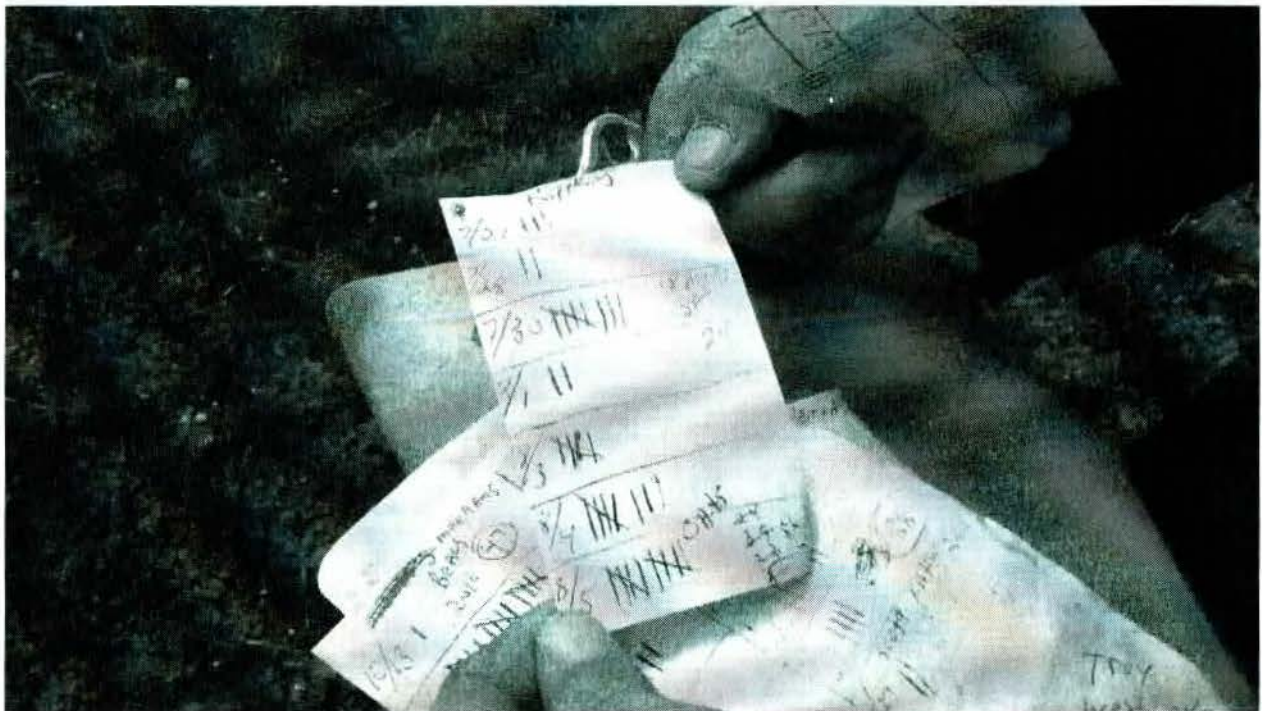
Photograph #38. Manure application records kept inside the tractor cab.



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Photograph #39. Manure application records kept inside the tractor cab.



Photograph #40. Manure application records kept inside the tractor cab.



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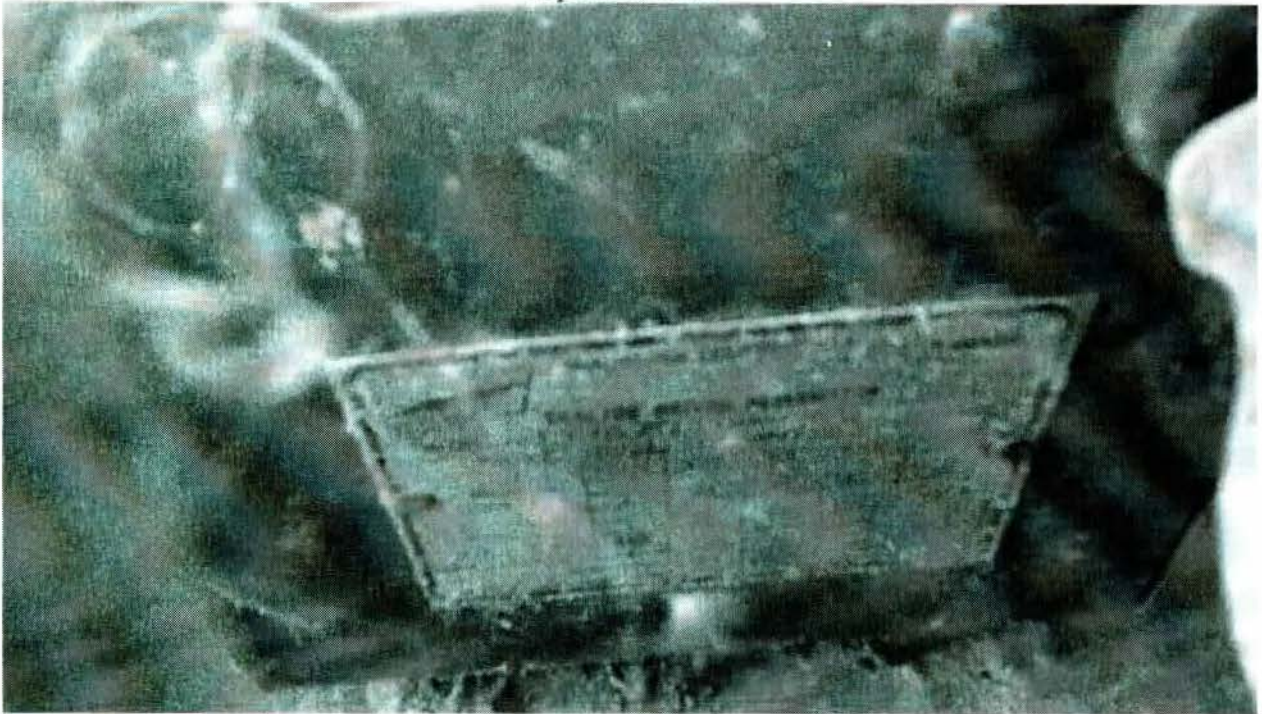
Photograph #41. One of the PTO driven generators on-site.



Photograph #42. One of the PTO driven generators on-site.



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Photograph #43. One of the PTO driven generators on-site.



Photograph #44. Manual power transfer switch for the one of the PTO generators on-site.



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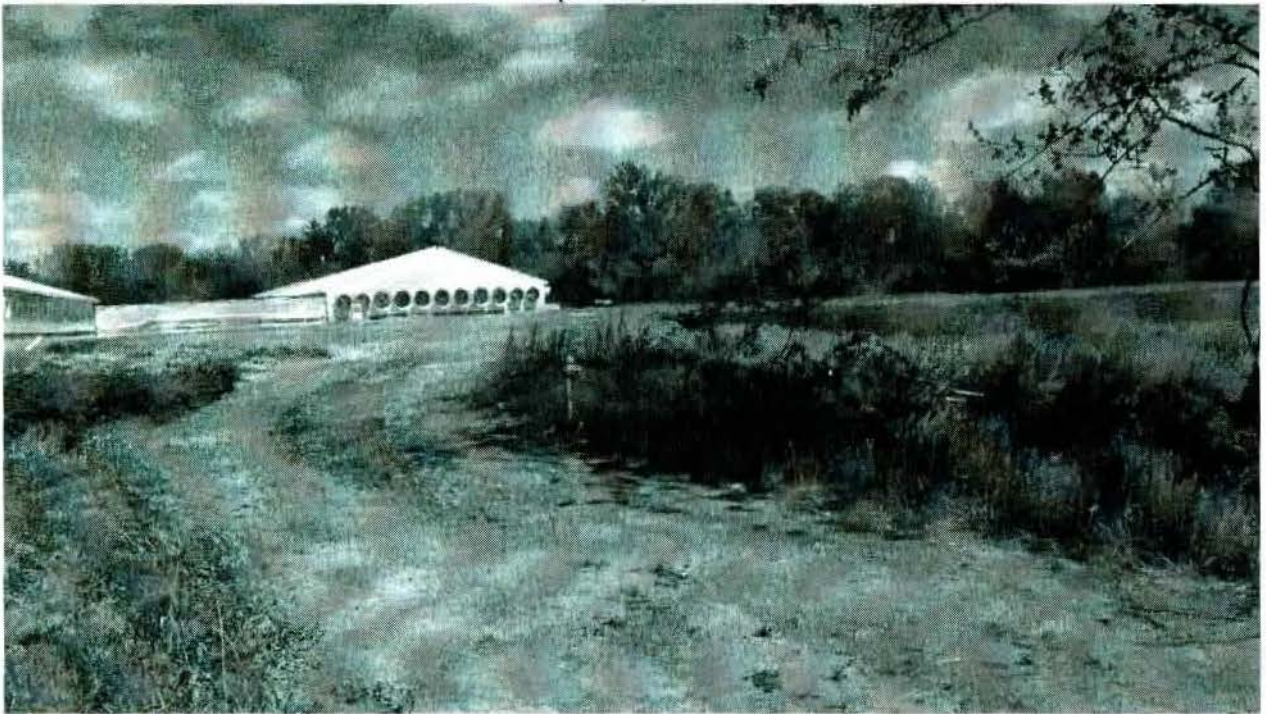
Photograph #45. One of the three wells located on the southeast side of the facility.



Photograph #46. One of the three wells located on the southeast side of the facility.



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Photograph #47. South side of the new addition on Building A. View is north.



Photograph #48. South side of site debris pile.



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Photograph #49. South side of site debris pile.



Photograph #50. South side of site debris pile.